(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



) (1990) BUILDON IN BORNO NON BONN BONN BONN AND HOn 1890) Build bern bonn bonn bonne in bonn ben in bonn ben in

(43) International Publication Date 8 July 2004 (08.07.2004)

PCT

(10) International Publication Number WO 2004/057493 A3

(51) International Patent Classification7:

G06F 17/30

(21) International Application Number:

PCT/GB2003/005096

(22) International Filing Date:

24 November 2003 (24.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0229625.9

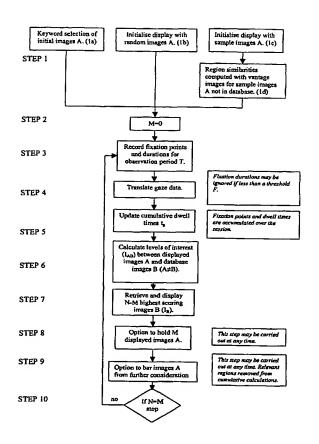
19 December 2002 (19.12.2002) GF

(71) Applicant (for all designated States except US): BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY [GB/GB]; BT Group Legal, Intellectual Property Department, PP C5A ,BT Centre, 81 Newgate Street, London EC1A 7AJ (GB).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): STENTIFORD, Frederick, Warwick, Michael [GB/GB]; Sheepstor, Boyton, Woodbridge, Suffolk IP12 3LH (GB).
- (74) Agent: LLOYD, Barry, George, William; BT Group Legal Intellectual Property Department, Holborn Centre, 8th Floor, 120 Holborn, London EC1N 2TE (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: SEARCHING IMAGES



(57) Abstract: A database of visual images includes metadata having, for a particular image, at least one entry specifying: a part of that image, another stored image, and a measure Sabi of the degree of similarity between that specified part and the specified other image. The searching method comprises displaying one or more images; receiving input from a user (for example by using a gaze tracker) indicative of part of the displayed images; determining measures of interest for each of a plurality of non-displayed stored images specified by the metadata for the displayed image(s), as a function of the similarity measure(s) and the relationship between the user input and the part specified; and, on the basis of these measures, selecting, from those non-displayed stored images, further images for display.

WO 2004/057493 A3



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 11 November 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



international Application No
CR 03/05006

A CLASS	SEICATION OF SUBJECT MATTER			7 00030	
ÎPC 7	GOGF 17/30				
According	to International Patent Classification (IPC) or to both national classif	ication and IPC			
B. FIELDS	SEARCHED				
Minimum d	ocumentation searched (classification system followed by classification sy	ation symbols)			
110 /	door				
Documente	ation searched other than minimum documentation to the extent that	Variable data and the second			
	the extent that	i such documents are inclu	ided in the fields so	earched	
Electronic o	data base consulted during the International search (name of data b	pase and, where practical,	search terms used	0	
	ternal, WPI Data, INSPEC			,	
	· 				
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT		 -		
Category °	Citation of document, with indication, where appropriate, of the re	elevant passages		Relevant to claim No.	
Х	RUI Y ET AL: "RELEVANCE FEEDBAC TOOL FOR INTERACTIVE CONTENT-BAS	K: A POWER		1-8	
	RETRIEVAL"				
i	IEEE TRANSACTIONS ON CIRCUITS AN FOR VIDEO TECHNOLOGY, IEEE INC.	D SYSTEMS NEW YORK			
	US,	nen rokk,			
	vol. 8, no. 5, 1 September 1998 (1998-09-01), p	2005			
	644-655, XP000779460	ages			
	ISSN: 1051-8215 page 644, right-hand column, las	+			
	paragraph - page 645, right-hand	column.			
	last paragraph page 646, left-hand column, paragraph 3				
		-/	i		
	•	-/			
Y Furth	er documents are listed in the continuation of box C.				
	egories of cited documents:	Patent family me	embers are listed in	annex.	
	nt defining the general state of the art which is not	"T" later document publis or priority date and it	not in conflict with t	he application but	
conside	ered to be of particular relevance ocument but published on or after the international	invention	the principle or the	ory underlying the	
L* documer	ate which may throw doubts on priority, claim(a) or	"X" document of particular cannot be considered	d novel or cannot b	he considered to	
citation	or other special reason (as specified)	"Y" document of particula	r relevance: the cla	ument is taken alone aimed invention	
otner m		uocumeni is compin	ea win one or mon	entive step when the	
P* document published prior to the international filing date but later than the priority date claimed		ments, such combination being obvious to a person skilled in the art. & document member of the same patent family			
Date of the a	ctual completion of the international search	Date of mailing of the			
6 September 2004		16/09/2004			
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2		Authorized officer			
	NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.	Vanala -			
Fax: (+31-70) 340-3016		Konak, E			

Form PCT/ISA/210 (second sheet) (January 2004)





C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	1-1/08 03/05096
Category °		
	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	YONG RUI ET AL: "A relevance feedback architecture for content-based multimedia information retrieval systems" CONTENT-BASED ACCESS OF IMAGE AND VIDEO LIBRARIES, 1997. PROCEEDINGS IEEE WORKSHOP ON SAN JUAN, PUERTO RICO 20 JUNE 1997, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 1997, pages 82-89, XP010252107 ISBN: 0-8186-7981-6 the whole document	1-8
X	SMEULDERS A W M ET AL: "CONTENT-BASED IMAGE RETRIEVAL AT THE END OF THE EARLY YEARS" IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE, IEEE INC. NEW YORK,	1-8
	US, vol. 22, no. 12, December 2000 (2000-12), pages 1349-1380, XP001050971 ISSN: 0162-8828 page 1349, right-hand column page 1368, left-hand column, paragraph 3 - page 1369, right-hand column, paragraph 3	·
·	·	

Form PCT/ISA/210 (continuation of second sheet) (January 2004)